

1 TITLE OF INVENTION: System and Method for Storage And Retrieval Of Information Subject to  
2 Authorization By A Data Controller  
3

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5 RELATED APPLICATION DATA

6 The present disclosure is a continuation-in-part application related to the U.S. Patent Application  
7 entitled "A System And Method For Merchant Invoked Electronic Commerce", Serial No. 09/167,873, filed  
8 October 7, 1998, from which priority is claimed.

9 FIELD OF THE INVENTION

10 This invention relates generally to a method and system where certain information pertaining to a  
11 data subject is stored on a server and is provided to a third party at the request of the data subject. More  
12 particularly, the present invention relates to a method and system where certain data subject information  
13 is stored on a server and is associated with a third party controller. The information may be provided to  
14 the controller, or to an party authorized by the controller (an "authorized data recipient"), thereby allowing  
15 the data subject to deliver information related to the data subject over a network in an easy and safe  
16 manner.

17 BACKGROUND OF THE INVENTION

18 The essence of electronic commerce is the exchange of information. The most common form of  
19 electronic commerce entails the purchase of products over the Internet using a credit card. Information  
20 necessary to consummate a credit card transaction includes the data subject's name, address, credit card  
21 information, and the amount to be charged. While the term "electronic commerce" is generally associated  
22 with the purchase of goods and services over the Internet, the term encompasses other transactions as  
23 well. For example, applications for insurance, college admissions, and loans are transactions that are not  
24 purchase transactions. Hence the term "transaction" is generally used herein to describe all manner of  
25 interactions over a network of the type noted above. The common element to all transactions is the

1 transfer of data from one party to another.

2 A person who wants to send personal data (the "data subject") can either type in the required  
3 information each time a transaction is consummated or store the data for retrieval. Typing in data is not  
4 only inefficient and prone to errors, but discourages Internet commerce. Using a local software solution is  
5 generally considered undesirable, as most such software programs are proprietary to a particular  
6 payment system, require the data subject to become skilled in the operation of the program, and are  
7 perceived as slow or unwieldy.

8 Repositories of data subject information exist in the "brick and mortar" world as well as the virtual  
9 world of the Internet. Associations like AARP and AAA have large membership databases. Some  
10 merchant sites on the web require data subjects to "register" with the merchant. These collections of data  
11 subject data have value outside their original purpose of facilitating purchasing. For example, a merchant  
12 may provide a registered data subject with certain member benefits. The holder of this data subject data  
13 may also exploit this information selling it to third parties for marketing purposes.

14 While databases of data subject information are inherently valuable, it is not easy for a controller  
15 of one of these databases to provide a data subject access to his or her data in a way that facilitates  
16 Internet commerce. Even if a data controller could make data subject information available to a data  
17 subject, the data controller would have to deal with the costs associated with providing the means of  
18 capturing the data subject data needed for a particular transaction and associated with protecting the  
19 data. Finally, if a data controller managed to make its data usable for commerce, it might prove difficult to  
20 leverage that data by making it available to others authorized by the controller to receive it.

21 Therefore, a need exists for a system that allows a controller of data subject information (the  
22 "data controller") to collect and securely store information from data subjects and to make data subject  
23 information available to the data subject to send selected information to the controller or to an authorized  
24 data recipient which could for the purposes of the application be a merchant, a college in case of  
25 application information, and other situations where information must be repetitively provided to a plurality  
26 of recipients. over the Internet in a manner that offers security and allows access from any computer. A

1 system to provide this for merchants is disclosed in copending application Serial No. 09/167,873, filed  
2 October 7, 1998, incorporated herein by reference in its entirety. The present invention expands upon  
3 this system to data controllers and authorized data recipients.

#### 4 SUMMARY OF THE INVENTION

5 It is therefore an object of the present invention to reduce the number of steps a data subject is  
6 required to perform in order to complete a transaction over any network.

7 A further object of the present invention is to reduce the number of steps a data subject is  
8 required to perform in order to complete a transaction over the Internet.

9 A further object of the present invention is to eliminate storage and retrieval software that is  
10 permanently stored on the data subject's computer used generally herein as a "network communication  
11 device" or NCD.

12 A further object of the present invention is to create a data repository for storing data subject  
13 information that can be operated by a data controller and accessed easily and transparently by a data  
14 subject.

15 A further object of the present invention is to allow authorized data recipients to access  
16 purchasing information relating to data subjects who are registered with data controllers without requiring  
17 a new registration.

18 A further object of the present invention is to allow authorized data recipients to register new data  
19 subjects whose data will reside with data controllers in a data repository.

20 A further object of the present invention is to allow a data subject to conduct transactions using  
21 data stored in the data repository from any computer connected to the network on which the data  
22 repository resides.

23 A further object of the present invention is to use the the data repository to aid the data subject in  
24 distributing all manner of information, not just purchase/money information, to a variety of recipients when  
25 those recipients are to receive essentially the same information from one recipient to the next.

1 A further object of the present invention is to provide a mechanism for direct marketing or  
2 distribution of relevant information to data subjects immediately before, during, or after completion of a  
3 transaction using a the data repository.

4 The present invention is a system for presenting a data subject's information to an authorized  
5 data recipient's computer to allow transactions to be consummated. The transaction may be the simple  
6 transmission of selected data subject information or for a purchase and sale of goods or services. The  
7 nature of the transaction will determine what data subject data is stored and presented. The system  
8 comprises a network communication device (NCD) associated with a data subject (the "data subject's  
9 NCD"), a computer associated with an authorized data recipient (the "authorized data recipient's  
10 computer"), and a server (the "data repository") on which the necessary and desirable information about  
11 the data subject is stored. The data subject's NCD, the authorized data recipient's computer, and the  
12 data repository are connected to a network, such as, but without limitation, the Internet, and communicate  
13 using communication protocols. The data subject's NCD can interpret and process files from the data  
14 recipient's computer and the data repository using software resident on the data subject's NCD(the "NCD  
15 software"). The authorized data recipient's computer operates a web server, provides transaction  
16 processing, and performs other functions. The authorized data recipient's computer may be a single  
17 device, or may, at the authorized data recipient's discretion comprise a number of devices that may or  
18 may not be co-located. The authorized data recipient's computer also operates software ("client  
19 software") that communicates with the data repository. The data repository, which is controlled by a data  
20 controller, operates data repository software, which provides access to information stored in various  
21 databases, logs, and/or datastructures of the data repository. Data controllers specify a list of authorized  
22 data recipients to the data repository with whom the data controllers' registered data subject information  
23 can be shared. Note that if the data controller is also a user of data subject information, the data  
24 controller will be acting as an authorized data recipient.

25 The present invention allows data subjects to send transaction information over a network and  
26 allows authorized data recipients to receive data subject information relating to that transaction. In the  
27 preferred embodiment, the transaction involves the purchase of goods and services. The network

connecting the data subject's NCD, the authorized data recipient's computer, and the data repository is the Internet, and the transaction data is purchasing data. However, the invention is not limited to a purchase transaction. As noted earlier, other types of transactions where information is exchanged is within the scope of the present invention.

During the web surfing process, a data subject browses an authorized data recipient's Web site via the data subject's NCD. The NCD may be any communications device connected to the network. In this example, it is assumed that the NCD is a computer. The authorized data recipient's Web site invites the data subject to send a set of data subject information to the authorized data recipient thereby consummating a transaction (an "offer").

The authorized data recipient's Web site also operates client software. When the data subject accepts the authorized data recipient's offer to consummate a transaction, the client software sends both a file readable by the NCD software and the authorized data recipient's offer to the NCD software that is resident on the data subject's NCD. The NCD software readable file includes information to identify the authorized data recipient, an address for the authorized data recipient's Web page and instructions that instruct the NCD software to communicate with the data repository software. The authorized data recipient's offer passes through the data subject's NCD to the data repository software resident on the data repository.

The data repository software verifies that the authorized data recipient is known to the data repository and identifies the data controllers that have authorized the authorized data recipient to receive data subject information. The data repository then returns a message to the NCD software and instructs the NCD software to display a dialog box within an area reserved for the dialog box within the authorized data recipient's Web page. The content of this dialog box depends on whether or not the data subject is known to the data repository software.

If the data subject is known to the data repository software, because of prior registration of the data subject, the data repository software determines if the data subject was registered by or in association with a data controller and if that data controller has authorized the authorized data recipient that sent the offer to receive the data subject's information. If the authorized data recipient is so

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authorized, the data repository software takes information contained in the authorized data recipient's offer, formats the information to allow the NCD software to display the authorized data recipient's offer, and sends the authorized data recipient's offer to the data subject's NCD where the authorized data recipient's offer is displayed by the NCD software in a dialog box within the area reserved for the dialog box within the authorized data recipient's Web page. The data subject is prompted to decide whether or not to complete the transaction. Typically, this communication occurs by the data subject clicking on an object resulting in a message being communicated to the data repository.

If the data subject elects to complete the transaction, the data repository software forwards the data subject's information to the authorized data recipient's computer. The information includes information from the authorized data recipient's offer and the data subject's information (e.g., credit card number, address, shipping address, social security number, etc.) that is stored on the data repository. The authorized data recipient's computer then uses the information to complete the transaction.

If the data subject is unknown to the data repository software, or if the data subject is known to the data repository software but the authorized data recipient sending the offer is not authorized by the data controller associated with the data subject to receive such data subject information, the data repository software sends a form to the data subject's NCD which is displayed in a dialog box within the area reserved for the dialog box within the authorized data recipient's Web page. The form prompts the data subject to provide the information necessary to complete the transaction. Once the data subject provides sufficient information to complete the transaction, the data repository software prompts the data subject to complete the transaction.

If the data repository software does not know the data subject, the data subject may be asked to register with the data repository under several scenarios. For example, the data subject may have reached the authorized data recipient's page through a link associated with the data controller. If the authorized data recipient is authorized by the data controller to receive data subject information, at the completion of the transaction with the authorized data recipient the data subject may be prompted to elect to have the information retained on the data repository for future use (the process herein referred to as "registration"). If the data subject answers "no", then the information is stored in a temporary data

1 structure. Information stored in the temporary data structure is retained for a set amount of time and is  
2 not available for reuse by the data subject. If the data subject answers "yes", then the information  
3 pertaining to the data subject is stored in a data structure intended for the retention and future use by the  
4 data subject and becomes a registered data subject of the data controller. The registration process is  
5 disclosed in copending application Serial No. 09/167,873, filed October 7, 1998, incorporated herein by  
6 reference in its entirety.

7 If the data subject elects to register with the data repository software, during the registration  
8 process, the NCD software is sent an NCD software identifier. In the preferred embodiment, the NCD  
9 software is a browser and the browser identifier is a cookie. The NCD software identifier contains data  
10 that are cryptographically protected to enhance security. The NCD software identifier allows the data  
11 repository software to identify the NCD software and permits a data subject to authenticate himself or  
12 herself, thereby permitting the data repository software to use the data subject's stored information in  
13 future transactions.

14 The system also allows data subjects who are registered on a different NCD to authorize the  
15 data repository software to use the data subject's stored information. This situation occurs when the data  
16 repository software cannot identify the NCD software identifier because there is no NCD software  
17 identifier in the NCD software or the NCD software identifier cannot be used to identify the particular data  
18 subject using the NCD software.

19 Since the system of the present invention establishes communication links between the  
20 authorized data recipient's computer and the data repository, the system can be optimized in several  
21 respects. For example, the price of goods or services may be affected by the relationship between the  
22 data controller and authorized data recipients, the location to which the item is to be shipped, the method  
23 of shipping, and by tax obligations. The data repository software communicates information pertaining to  
24 the data subject to the authorized data recipient's computer permitting the authorized data recipient's  
25 computer to determine a "final" price based on the data subject's information, i.e., shipping address  
26 and/or preferences.

Another example of optimization is the ability of the data repository software to present a data controller or authorized data recipient's brand, both brands, or other "brand" to the NCD software. If the data subject is making a purchase (first or repeat) at a authorized data recipient Web site, a top graphic and colors used by the data repository prompt can be specified by the authorized data recipient offer and a bottom graphic used by the data repository prompt can be specified in accordance with the data controller involved. The data repository software can also associate a data subject with an identification code that can be presented to the authorized data recipient's computer, thus allowing the authorized data recipient to "recognize" a data subject and provide customer-specific messages, displays, and offers. The data repository software can tailor its communication with the data subject's NCD in accordance with a profile created by the data repository software. The profile is based upon preferences chosen by the data subject or created by the data repository software based on the data subject's behavior, from preferences chosen by the data controller or authorized data recipient, by a branding party, or the like.

With respect to data subjects, the system is optimized to provide all of the transaction information to the data subject thereby allowing the data subject to verify the information and make a decision to complete a transaction without further information input from the data subject. The system can also establish a dialogue between the data subject's NCD and the data repository to permit the data subject to select from options such as which credit card to use, the shipping address, and the shipping means.

The relationship between the data controller and authorized data recipient further allows the customer to shop at a wider variety of authorized data recipients without having to repeatedly register with each one.

## BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 illustrates the overall architecture of the present invention.

Figure 2A illustrates the process of consummating a transaction over a network.

Figure 2B illustrates the process of consummating a transaction over a network (continued).



1 Figure 2C illustrates the process of consummating a transaction over a network (continued).

2 Figure 2D illustrates the process of consummating a transaction over a network (continued).

3 DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

4 For the purpose of this application, the term software is deemed to include instructions.

5 Referring to **Figure 1**, the overall architecture of the present invention is illustrated. The present  
6 invention allows data subject **100** to conduct a transaction over network **160** and allows authorized data  
7 recipient **120** of a data controller (not shown) to receive information relating to the transaction.

8 To complete a transaction, data subject **100** uses data subject network communication device  
9 ("consumer's NCD") **102**. Data subject's NCD **102** can be a computer or a wireless device and operates  
10 software that is either a Web browser or emulates a Web browser (the "NCD software") **104**. In either  
11 case, the NCD software has the requisite capability of displaying the information supplied by data  
12 recipient computer **122**. The NCD software **104** allows data subject **100** to download and display Web  
13 pages or other information from the authorized data recipient's computer **122**.

14 To receive information relating to the transaction, authorized data recipient **120** uses authorized  
15 data recipient's computer **122**. Data recipient's computer **122** operates Web server software **124** and  
16 client software **126**. Web server software **124** displays an authorized data recipient's Web pages. Client  
17 software **126** allows authorized data recipient **120** to communicate with the data repository (the "data  
18 repository") **140**. An authorized data recipient may be an authorized data recipient for multiple data  
19 controllers, but only needs to load a single copy of the client software **126**.

20 In the preferred embodiment, data repository **140** is under the control of a data controller although  
21 this is not meant as a limitation since the data repository need not be under control of the a data controller  
22 but can operate independently. However, for this embodiment the data repository is under the control of  
23 a data controller and comprises data repository software **142** which gathers and stores the transaction  
24 information of data subjects registered with a data controller (or on behalf of a data controller through a  
25 authorized data recipient) to complete a transaction over common network **160**, temporary data structure

26 **144** which stores data subject information for a limited amount of time and cannot be used in future

1 transactions, data subject data structure **146** which stores data subject information associated with a data  
2 controller that can be used in future transactions, authorized data recipient data structure **148** which  
3 stores information pertaining to the data controller or authorized data recipient, data subject transaction  
4 log **150** which stores information pertaining to the transactions for registered data subjects, and  
5 authorized data recipient transaction log **152** which stores information pertaining to transactions for  
6 registered and non-registered data subjects.

7 Consumer NCD **102**, data recipient's computer **122**, and data repository **140** are connected to  
8 common network **160**. The present invention can operate over various types of common networks both  
9 wired and wireless. The present invention can operate over the Internet, cable systems, satellite  
10 systems, wireless networks, intranets, LANS, and WANS however this list should not be construed as a  
11 limitation. In the preferred embodiment, the common network is the Internet.

12 It should also be noted that a network **160** may actually comprise more than one network. This  
13 would be the case where the data subject's NCD is a wireless device which must first communicate over  
14 a wireless network and then over the Internet.

15 Data repository software **142** gathers and stores the information needed to complete a  
16 transaction over common network **160**. Data repository software **142** gathers the information directly from  
17 data subject **100**, from data subject data structure **146** or from both.

18 Temporary data structure **144** stores information relating to a particular interaction between data  
19 subject **100** and authorized data recipient **120**.

20 Authorized data recipient data structure **148** stores information relating to authorized data  
21 recipients associated with the data controller, including authorized data recipient **120**, that have  
22 completed the registration process with the operator of data repository **140** (either directly or through the  
23 authorized data recipient on behalf of a data controller). The information in authorized data recipient  
24 data structure **148** represents information that is necessary to identify authorized data recipient **120** and  
25 authorized data recipient computer **122**. This information also includes contact information, authorized  
26 data recipient identification number, data controller information, network location(s) for the authorized

1 data recipient computer **122**, the type of transaction accepted, accepted payment card types, accepted  
2 currencies, and payment methods (e.g., electronic check, micropayments). This list of information should  
3 not be construed as a limitation and is illustrative only.

4 Consumer transaction log **150** stores information relating to transactions performed by registered  
5 data subjects. Authorized data recipient transaction log **152** stores information relating to transactions  
6 performed by registered and non-registered data subjects, including data subject **100**. The operator of  
7 data repository software **142** can allow data subjects and authorized data recipients access to the  
8 information contained in their respective data structures as deemed necessary. For instance, data  
9 subject **100** can be given a summary of the data subject's transactions over a period of time. Authorized  
10 data recipient **120** can be given a summary of the authorized data recipient's transactions over a period of  
11 time.

12 Referring to **Figures 2A**, the process of purchasing an item over a network is illustrated. The  
13 following process is the preferred embodiment of the present invention. In alternate embodiments, similar  
14 processes can occur in different orders. Additionally, a transaction involving the exchange of information  
15 may involve the storage and retrieval of data different from that described in the following example.

16 In the preferred embodiment, data subject **100** and authorized data recipient **120** are registered  
17 with and known to data repository **140**. The process by which data subject **100** becomes registered and  
18 the handling procedures in the even one or both are not registered are described in copending application  
19 Serial No. 09/167,873, filed October 7, 1998, incorporated herein by reference in its entirety.

20 The purchasing process starts with a data subject requesting a authorized data recipient's offer  
21 **200** from a authorized data recipient. In response to the data subject's request, the authorized data  
22 recipient's computer responds by sending both a file that is readable by the NCD software and the  
23 authorized data recipient's offer to the data subject's NCD **202**. The NCD software processes the  
24 browser readable file and sends the authorized data recipient's offer and a message which is received by  
25 data repository **204**. The authorized data recipient's offer includes the following information, however  
26 this information is not meant as a limitation since other data types may also be useful: authorized data

recipient identifier, price of the item, a form of digital signature of the authorized data recipient, a final price indicator, and a transaction number. The authorized data recipient identifier identifies the authorized data recipient who is offering the item for sale. The identifier is used to confirm that the authorized data recipient is known to the data repository and to associate the authorized data recipient with one or more data controllers 205. The price of the item is cost to purchase the item. A digital signature of the authorized data recipient is used to ensure the validity of the offer. The final price indicator is used to indicate whether the final cost for the item is affected by the data subject's shipping address and/or shipping preference. The transaction number is used for tracking purposes. The transaction number does not contain any product identifying information. The transaction number acts as an identifier for identifying a transaction.

The message sent from the NCD software to the data repository indicates whether the browser contains a browser identifier (an NCD software identifier). In the preferred embodiment, the browser identifier is a cookie and comprises a unique identifier that differentiates it from all other identifiers. A browser identifier identifies the data subject browser on a specific data subject computer. The data repository software receives and processes the message to determine if the NCD software contains an identifier that identifies a data subject that matches a data entry in a file in the data subject data structure of the data repository 206.

The data repository software also determines whether a single user or multiple users have used the NCD software by checking the data subject data structure and by permitting data subjects to access their data from remote computers. The processes by which these features are implemented are described in detail in copending application Serial No. 09/167,873, filed October 7, 1998, incorporated herein by reference in its entirety.

If the data repository software determines that the information provided by the data subject matches the information the data subject supplied during registration, then using the authorized data recipient identifier included in the offer sent to data subject computer (Figure 1, 102) by authorized data recipient computer (Figure 1, 122), the data repository software will determine if the authorized data recipient that delivered the offer to the data subject has been authorized by the data controller to receive

1 data subject information stored on the data repository **207**.

2 If the data repository software determines that the information provided by the data subject  
3 matches the information the data subject supplied during registration and the authorized data recipient is  
4 authorized by the data controller, then the data repository software accesses and gathers the data  
5 subject's information which is stored in the data subject data structure **214**.

6 If the data repository software determines that more than one user is using the data subject's  
7 NCD **208**, the data repository software asks for user identification **210**. Based on the user information,  
8 the data repository determines if the user is known **212**. If so, user data is retrieved from the data  
9 repository. If the user is not known, the data repository prompts the use to enter further information to  
10 become registered or to provide information to complete the transaction.

11 Referring to **Figure 2B**, the process flow continues. If the data repository software determines  
12 that the information provided by the data subject is insufficient to identify the data subject or that the data  
13 subject and data recipient are not associated with a common data controller, then the data repository  
14 software prompts the data subject for the purchasing information to complete the transaction by  
15 displaying forms to be completed **216**. The response from the NCD software is received by the data  
16 repository **218**.

17 The data repository software extracts the data from the completed forms **220** and stores the data  
18 in a temporary data structure **222**. The information acquired from the forms is evaluated to determine if  
19 the information from the data subject is sufficient to complete the purchase transaction **224**. This step  
20 includes the data repository software accessing the authorized data recipient data structure using the  
21 authorized data recipient identifier to ensure that the data subject's purchasing information is in proper  
22 order, i.e., to check that the data subject's credit card accepted by the authorized data recipient. If the  
23 information is not sufficient, the data subject is prompted for the information again **216**. The operator of  
24 the data repository can set the number of iterations that the data subject is prompted for the information.  
25 If the data is sufficient, the data subject is asked to purchase the item **226**. If the data subject declines  
26 the transaction, the dialog ends **228**. If the data subject decides to buy the item, the data collected in the

1 form is sent to the data recipient **230**. However, the transaction data is not permanently stored at the  
2 data repository.

3 Referring to **Figure 2C**, the process flow continues. Once the data repository software  
4 determines that the data subject's information is sufficient to complete the purchase transaction, the data  
5 repository software then determines if the price of the item needs to be adjusted for shipping costs **236**. If  
6 price adjustment is required, new price information is obtained from the authorized data recipient **230**.  
7 The revised offer is then presented to the data subject **240**. If no price adjustment is required **236**, the  
8 final offer is presented to the data subject **240**. The system next displays the offer and determines if the  
9 data subject needs to enter a passphrase. If the data subject is a registered data subject of the data  
10 controller who has not gone through the authentication process yet, then offer is then augmented with a  
11 prompt for the user to enter the data subject's passphrase **244**. The data repository software evaluates  
12 the entered passphrase against data held in the data subject data structure **246** to determine if the data  
13 subject is known (registered) by the data repository software. If the passphrase does not match, then the  
14 data subject is prompted for the correct passphrase **244**. The operator of the data repository can set the  
15 number of iterations that the data subject is prompted for a correct passphrase to avoid multiple  
16 fraudulent attempts to access information.

17 Once the data subject enters a correct passphrase or if there was no browser identifier for the  
18 data subject, the data subject is presented with a buy decision **248**. The data subject has several options  
19 available at this step: the data subject can elect to buy the item, change the data subject's information  
20 and buy the item, or cancel the transaction. If the data subject elects to change the data subject's  
21 information, the data subject must still decide to either buy the item or cancel the transaction after  
22 changing the information. If the data subject declines to purchase the item, then the transaction is  
23 canceled **250**, and the information held in the temporary data structure is deleted, the dialogue ends and  
24 the transaction is terminated **250**.

25 The data subject also has the option of changing the data subject's information. The data  
26 subject may wish to change such information for such reasons as the data subject does not agree with  
27 the selection by the data repository software or the information contains an error. For instance, if the data

1 subject wishes to change the shipping address, the data subject can enter a new shipping address. In  
2 some instances, the data subject can have a plurality of possible entries into the same information block  
3 with a preferred entry. In such a situation, the data repository software chooses the preferred information  
4 to enter into the information block. The data repository software chooses the information via any  
5 selection process known in the art, such as most popular, last used, first used, etc. However, the data  
6 repository software cannot enter information into an information block if the authorized data recipient will  
7 not allow such an entry. For instance, a authorized data recipient may only accept the ACME credit card  
8 and the data subject has not previously used an ACME credit card to purchase an item using the present  
9 invention. In such a situation the data repository software prompts the data subject to provide an  
10 acceptable form of payment. Information options are available to the data subject in the form of directory  
11 of addresses, shippers, shipping methods, credit cards, and other information options.

12 Referring to **Figure 2D**, if the data subject elects to purchase the item, then the information  
13 regarding the transaction is delivered to the authorized data recipient's computer, information is written to  
14 the authorized data recipient transaction log, and a message confirming the transaction is sent to the data  
15 subject's NCD **252**. The information regarding the transaction is written to the data subject transaction  
16 log **256**.

17 The transaction process ends **264**.

18 If a data subject is registered with more than one data controller and attempts to make a  
19 purchase with a authorized data recipient common to both data controllers, the data subject registration  
20 used to make the purchase is determined by the authorized data recipient and can be determined, for  
21 example, according to the particular area of the authorized data recipient Web site accessed by the data  
22 subject or according to the previous or linking site used by the data subject.

23 Although the above description is directed at purchasing an item over the Internet, the same  
24 concept of distribution of information can be applied to other areas.

25 In all of these different type of embodiments, the communications between the different parties  
26 can be encrypted in any manner known in the art. In addition, some of the communications can be

1 accomplished in different manners. For example, in an alternate embodiment of the preferred  
2 embodiment, communications between the data repository and the authorized data recipient computer  
3 can occur using a separate communication link. The communication link can be a direct link between the  
4 authorized data recipient and the data repository. Using this separate link can ensure against  
5 unauthorized transactions.

6 Although the present invention has been described in detail for purpose of illustration, it is  
7 understood that such detail is solely for that purpose, and variations can be made therein by those skilled  
8 in the art without departing from the scope of the invention. The preceding descriptions of the operations  
9 of the present invention are merely illustrative. In various embodiments of the disclosed inventions  
10 operational steps may be added, eliminated, performed in parallel or performed in a differing order. The  
11 apparatus and process of the present invention is defined by the following claims.